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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
| 10/711,016 | 08/18/2004 | Kuang-Lung Kuo | TOPP0024USA | 5015 |
| 27765 . 7590 03/02/2007 NORTH AMERICA INTELLECTUAL PROPERTY CORPORATION P.O. BOX 506 MERRIFIELD, VA 22116 | | | EXAMINER CHEN, WEN YING PATTY | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2871 | |
| SHORTENED STATUTORY PERIOD OF RESPONSE | | NOTIFICATION DATE | DELIVERY MODE | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 03/02/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

winstonhsu@naipo.com

Office Action Summary

Application No.

10/711,016

Applicant(s)

KUO ET AL.

Examiner

W. Patty Chen

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2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 December 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) 9 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 August 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

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DETAILED ACTION

Response to Amendment

Applicant's Amendment filed Dec. 26, 2006 has been entered. Claims 1-10 remain pending in the current application, but claim 9 is withdrawn from consideration.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

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invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-3 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kashimoto (US 5844645) in view of Kiguchi et al. (US 6872586).

With respect to claim 1: Kashimoto discloses in Figures 3 and 4 a color filter structure comprising:

a substrate (element 21) having a rim region (element 16) and a central region (element 15) defined thereon;

a first light-blocking layer (element 26) positioned within the rim region on the substrate;
and

a plurality of color filters (elements 23-25) positioned in the central region on the substrate.

Kashimoto fails to disclose that the color filters are conductive so as to form a common electrode.

However, Kiguchi et al. teach in Column 4 lines 51-52 the use of a conductive color filter layer such that the color filter layer also serves as an electrode.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to construct a color filter structure as taught by Kashimoto wherein the color filters are conductive so as to also form as an electrode as taught by Kiguchi et al., since Kiguchi et al. teach that having the conductive color filter also serving as an electrode reduces the number of parts necessary, thus reduce the manufacturing cost (Column 4, lines 51-55).

As to claim 2: Kashimoto further discloses in Figures 3 and 4 and Column 5 lines 12-17 that the central region corresponds to a pixel region on a thin-film transistor substrate.

As to claim 3: Kashimoto further discloses in Column 5 lines 43-44 that the color filters comprise at least a red color filter, at least a green color filter and at least a blue color filter.

As to claim 6: Kashimoto further discloses in Figures 3 and 4 that the color filter structure further comprising a plurality of second light-blocking layers (element 22) positioned on the substrate except the rim region, the second light-blocking layers being used to avoid light interference between two adjacent color filters.

Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kashimoto (US 5844645) and Kiguchi et al. (US 6872586) in view of Ohtsu et al. (US 6436591).

With respect to claim 4: Kashimoto and Kiguchi et al. disclose all of the limitation set forth in claim 1, but both failed to specifically disclose that the conductive color filters comprise conductive macromolecular compounds.

However, Ohtsu et al. teach in Column 26 lines 14-38 and Column 26 line 62 through Column 27 line 15 conductive color filters that comprise conductive macromolecular compounds.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to construct a color filter structure as taught by Kashimoto and Kiguchi et al. wherein the conductive color filters comprise conductive macromolecular compounds as taught by Ohtsu et al., since Ohtsu et al. teach that by forming conductive color filters of conductive

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macromolecular compounds helps to prevent a change of properties of the color filter structure (Column 26, lines 62-64).

As to claim 5: Kashimoto and Kiguchi et al. disclose all of the limitation set forth in claim 1, but both failed to specifically disclose that the conductive color filters comprise conductive nanometer particles.

However, Ohtsu et al. teach in Column 26 lines 44-47 conductive color filters that comprise conductive nanometer particles.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to construct a color filter structure as taught by Kashimoto and Kiguchi et al. wherein the conductive color filters comprise conductive nanometer particles as taught by Ohtsu et al., since Ohtsu et al. teach that by forming conductive color filters of conductive nanometer particles helps to prevent the occurrence of a deposit which results in non-uniform imaging and lowering of transmittance (Column 26, lines 44-61).

Claims 7 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kashimoto (US 5844645) and Kiguchi et al. (US 6872586) in view of Cheng (US 5721599).

With respect to claim 7: Kashimoto and Kiguchi et al. disclose all of the limitations set forth in the previous claims, but both failed to disclose that the second light-blocking layers are composed of conductive materials.

However, Cheng teaches in Figure 3 light-blocking layers (element 36), which are conductive and set to the same potential as the common electrode and are partially overlapped with its adjacent conductive color filters.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to construct a color filter structure as taught by Kashimoto and Kiguchi et al. wherein the light-blocking layers are conductive as to have the same potential as the common electrode, in which in this instant case, as the same potential as the color filters which act as the common electrode, as taught by Cheng, since Cheng teaches that having conductive light-blocking layers helps to improve the contrast level of the display (Abstract).

As to claim 10: Kashimoto and Kiguchi et al. disclose all of the limitations set forth in the previous claims and Kashimoto further discloses in Figure 4 that the color filters are partially overlapped with the first light-blocking layer, but both failed to disclose that the first light-blocking layers are composed of conductive materials.

However, Cheng teaches in Figure 3 light-blocking layers (element 36), which are conductive and set to the same potential as the common electrode and are partially overlapped with its adjacent conductive color filters.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to construct a color filter structure as taught by Kashimoto and Kiguchi et al. wherein the light-blocking layers are conductive as to have the same potential as the common electrode, in which in this instant case at a potential as the same potential as the color filters which act as the common electrode, as taught by Cheng, since Cheng teaches that having conductive light-blocking layers helps to improve the contrast level of the display (Abstract).

Claims 1, 6 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kishimoto et al. (US 6600532) in view of Kiguchi et al. (US 6872586).

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With respect to claim 1: Kishimoto et al. disclose in Figure 3 a color filter structure comprising:

a substrate (element 12) having a rim region and a central region defined thereon;
a first light-blocking layer (element 14') positioned within the rim region on the substrate (Column 6, lines 31-34); and
a plurality of color filters (elements 15'R, 15'G and 15'B) positioned in the central region on the substrate.

Kishimoto et al. fail to disclose that the color filters are conductive so as to form a common electrode.

However, Kiguchi et al. teach in Column 4 lines 51-52 the use of a conductive color filter layer such that the color filter layer also serves as an electrode.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to construct a color filter structure as taught by Kishimoto et al. wherein the color filters are conductive so as to also form as an electrode as taught by Kiguchi et al., since Kiguchi et al. teach that having the conductive color filter also serving as an electrode reduces the number of parts necessary, thus reduce the manufacturing cost (Column 4, lines 51-55).

As to claim 6: Kishimoto et al. further disclose in Figure 3 that the color filter structure further comprising a plurality of second light-blocking layers (element 14') positioned on the substrate except the rim region, the second light-blocking layers being used to avoid light interference between two adjacent color filters (Column 6, lines 31-34).

As to claim 8: Kishimoto et al. further disclose in Figure 3 that the second light-blocking layers (element 14') are composed of insulating materials (Column 6, lines 51-53), and each of the color filters contacts its adjacent color filter(s) (as shown in the figure).

Response to Arguments

Applicant's arguments filed on Dec. 26, 2006 have been fully considered but they are not persuasive.

Applicants argue that both prior arts Kashimoto and Kishimoto teach that the color filter layer is formed on the opposite substrate as the TFT substrate, but Kiguchi teaches that the conductive color filter layer is formed on the TFT substrate, therefore, there is not motivation for combining the references. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Kiguchi was relied on for teaching that the color filter layer can be formed of conductive material, thus act as a conductive electrode. Therefore, one of ordinary skill in the art would have the knowledge to formed a conductive color filter on the color filter substrate to also serve as a conductive electrode (in this case, the common electrode), since Kiguchi et al. teach that having the conductive color filter also serving as an

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electrode reduces the number of parts necessary, thus reduce the manufacturing cost (Column 4, lines 51-55).

Regarding claim 5, Applicants argue that Ohtsu's particles are colorant particles in micrometer without conductivity, which do not anticipate the claimed conductive nanometer particles. However, the Examiner maintains the rejection, since Ohtsu discloses specifically in Column 3 lines 31-37 that the colorant particles are conductive and in Column 26 lines 44-47 that the colorant particles having an average diameter in the range of 0.02 μ m to 0.3 μ m (same as 20nm to 300nm, thus are considered nanometer particles).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to W. Patty Chen whose telephone number is (571)272-8444. The examiner can normally be reached on 8:00-5:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David C. Nelms can be reached on (571)272-1787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

W. Patty Chen
Examiner
Art Unit 2871

WPC
2/20/07


ANDREW SCHECHTER
PRIMARY EXAMINER